

Appl. No. 10/656,572
Amdt. dated July 8, 2004
Reply to Office action of March 9, 2004

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A device for automatically flushing above-ground hydrants, the device being adapted to be installed externally to an outlet of an existing above-ground hydrant with the device being substantially external of the hydrant and the hydrant being substantially external of the device, the device comprising:

~~a nipple adapted for attaching the device to a hydrant;~~

a valve for controlling flow from the hydrant through the valve;

a control for automatically operating the valve; and

a ~~lockable~~ box containing at least one of the valve and the control, the box having an ~~outlet for~~ inlet allowing water from the hydrant to pass into the box and an outlet allowing water from the valve to pass to the exterior of the box.

2. (currently amended) The device of claim 1 wherein the inlet comprises an internally threaded collar ~~[[is]]~~ rotatably mounted ~~externally of~~ to the box.

3. (original) The device of claim 1 wherein the control is mounted internally of the box, the box being lockable.

4. (original) The device of claim 3 wherein the control is programmable by a user.

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5. (original) The device of claim 4 wherein the control includes manually operable devices for setting at least one of time of operation and duration of operation.

6. (original) The device of claim 4 wherein the valve is bistable and the control is battery operated.

7. (currently amended) The device of claim ~~[[1]]~~ 10 wherein the perforate diffuser ~~box~~ includes a perforate ~~lower wall of the box~~ through which water may escape.

8. (original) The device of claim 1 wherein a hose or pipe extends through a wall of the box to expel water.

9. (original) The device of claim 8 wherein the hose or pipe is physically connected to an outlet of the valve.

10. (currently amended) A device for automatically flushing hydrants, the device being adapted to be installed externally of an existing hydrant, the device comprising a coupling adapted for attaching the device to a hydrant; a valve for controlling flow from the hydrant through the valve; a control for automatically operating the valve; and a box containing at least the valve, the box having an outlet for allowing water from the hydrant to pass from the valve to the exterior of the box, the device. ~~The device of claim 4 further comprising a perforate diffuser which diffuses water after it passes through the valve.~~

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11. (currently amended) A device for automatically flushing hydrants, the device being adapted to be installed externally of an existing hydrant, the device comprising a coupling adapted for attaching the device to a hydrant; a valve for controlling flow from the hydrant through the valve; a control for automatically operating the valve; and a box containing at least the valve, the box having an outlet for allowing water from the hydrant to pass from the valve to the exterior of the box, the device, the box includes including a carrying handle.

12. (original) The device of claim 11 wherein the box includes an upper wall, the handle being secured to the upper wall.

13. (currently amended) A method of automatically flushing a portion of a water distribution system, the system including a pre-existing hydrant, the hydrant having a below-ground inlet connected to the water distribution system, an above-ground threaded outlet, and a manually operable valve between the inlet and the outlet, the method comprising bringing a portable, self-contained device to the hydrant, and installing [[a]] the device to the threaded outlet of the hydrant, the device comprising an electrically operable valve and a control for periodically operating the electrically operable valve; opening the manually operable valve to allow water to flow through the hydrant into the device, and thereafter allowing the control to open the electrically operable valve periodically to cause water to flow from the water distribution system

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through the hydrant [[,]] and through the electrically operable valve to flush a portion of the water distribution system.

14. (original) The method of claim 13 wherein the control is mounted internally of a box, the method including programming the control to select at least one of time and duration of opening the valve in the box.

15. (currently amended) The method of claim 14 wherein the outlet of the hydrant is ~~externally~~ threaded, and wherein attaching the device to the hydrant comprises threading ~~an internally a threaded collar onto~~ a coupling to the outlet of the hydrant, the ~~internally threaded collar~~ coupling being rotatably mounted to the box.

16. (currently amended) The method of claim 15 wherein the coupling is a collar is mounted to a nipple, externally of the box.

17. (currently amended) The method of claim 14 wherein the box includes a perforate lower wall, the perforate wall diffusing water expelled through it.

18. (original) The method of claim 14 wherein the hydrant supports the box and holds it above the ground.

19. (original) The method of claim 18 wherein a hose or pipe is provided, the hose or pipe carrying water from the valve to the exterior of the box.

20. (currently amended) The method of claim ~~44~~ 13 wherein the hydrant is a fire hydrant.

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21. (currently amended) The method of claim 44 13 wherein the hydrant is a flushing hydrant.

22. (new) A method of automatically flushing a portion of a water distribution system, the system including a hydrant, the hydrant having a below-ground inlet connected to the water distribution system, an above-ground threaded outlet, and a manually operable valve between the inlet and the outlet, the method comprising installing a device to the threaded outlet of the hydrant so that the device is supported above the ground by the hydrant, the device comprising an electrically operable valve and a control for periodically operating the electrically operable valve; opening the manually operable valve to allow water to flow through the hydrant into the device, and thereafter allowing the control to open the electrically operable valve periodically to cause water to flow from the water distribution system through the hydrant and through the electrically operable valve to flush a portion of the water distribution system.

23. (new) In combination,

a hydrant, the hydrant having a below-ground inlet adapted to be connected to an underground water distribution system, a generally vertical wall having an above-ground outlet, and a manually operable valve between the inlet and the outlet, and

a device for automatically flushing the hydrant, the device being installed externally of the hydrant, the device comprising a coupling attached to the outlet of the

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hydrant; a valve for controlling flow from the hydrant through the valve; a control for automatically operating the valve; and a box containing at least one of the valve and the control, the box having an outlet for allowing water from the hydrant to pass from the valve to the exterior of the box,

the generally vertical wall of the hydrant being outside the box of the device.

24. (new) The combination of claim 23 wherein the hydrant supports the box above the ground.

25. (new) The combination of claim 23 wherein the outlet of the hydrant is threaded, and wherein the device comprises a threaded collar threaded onto the outlet of the hydrant, the threaded collar being rotatably mounted to the box.

26. (new) A device for automatically flushing above-ground hydrants, the device being adapted to be installed externally of an existing above-ground hydrant, the device comprising:

an inlet and an outlet;

a valve for controlling flow from the hydrant through the valve;

a control for automatically operating the valve; and

a box containing at least one of the valve and the control,

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the inlet comprising a coupling adapted for attaching the box to an outlet of an above-ground hydrant; the coupling allowing water from the hydrant to flow from the hydrant into the box;

the outlet allowing water from the hydrant to pass from the valve to the exterior of the box.

27. (new) A device for automatically flushing above-ground hydrants, the device being adapted to be installed externally of an existing above-ground hydrant, the device comprising:

an inlet and an outlet;

a valve for controlling flow from the hydrant through the valve;

a control for automatically operating the valve; and

a box containing the valve and the control,

the inlet comprising a swivel coupling mounted on the box, the coupling being adapted for attaching the box to an outlet of an above-ground hydrant; the coupling allowing water from the hydrant to flow from the hydrant into the box;

the outlet allowing water from the hydrant to pass from the valve to the exterior of the box.

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28. (new) In combination,

a device for automatically flushing a hydrant, the device comprising an inlet; a valve for controlling flow from the inlet through the valve; a control for automatically operating the valve; and a box containing at least one of the valve and the control, the box having an outlet for allowing water from the valve to pass from the valve to the exterior of the box, and

a hydrant, the hydrant having a below-ground inlet adapted to be connected to an underground water distribution system, an above-ground outlet, and a manually operable valve between the inlet and the outlet,

the inlet of the device being attached to the above-ground outlet of the hydrant, the hydrant being external of the box.

29. (new) The combination of claim 28 wherein the inlet comprises a swivel coupling attached to the box.

30. (new) A method of automatically flushing a portion of a water distribution system, the system including a hydrant, the hydrant having a below-ground inlet connected to the water distribution system, an above-ground outlet, and a manually operable valve between the inlet and the outlet, the method comprising installing a device to the outlet of the hydrant, the device comprising a box containing an electrically operable valve and a control for periodically operating the electrically operable valve;

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opening the manually operable valve to allow water to flow through the hydrant into the box, and thereafter allowing the control to open the electrically operable valve periodically to cause water to flow from the water distribution system through the hydrant and through the electrically operable valve to flush a portion of the water distribution system.